

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A honeycomb structural body having a plurality of cells to function as a passage for a fluid divided by porous partition walls, specified cells being plugged at one of two end faces and the remaining cells being plugged at other end face alternately, a fluid flowing into an unplugged end face side of one set of cells being caused to pass through the cells and permeate through the partition walls, thus permeated fluid being discharged from an unplugged end face side of the other cells, wherein a cross-section pattern of the partition walls perpendicular to flow direction of the fluid has a grille shape of which gratings cross in x axis and y axis directions, and there are at least two kinds of cells different from each other in their cross-sectional areas perpendicular to the flow direction of a fluid to be filtered due to different interval pitches of the partition walls in the x axis direction and/or different interval pitches of the partition walls in the y axis direction,

wherein, in the cross-section pattern, each partition wall constitutes a straight line extending across an entire area of the cross-section pattern.

2. (Previously Presented) The honeycomb structural body according to claim 1, wherein the intervals of the partition walls in the x axis direction and/or the intervals of the partition walls in the y axis direction are determined by a repetition of which a unit comprising a plurality of partition walls is a prescribed pattern, whereby intervals of the partition walls are changed, as predetermined.

3. (Previously Presented) The honeycomb structural body according to claim 1, wherein one of the two end faces of the specified cells and the other end face of the remaining cells are alternately plugged to form a checkerwise pattern as a whole.

4. (Previously Presented) A honeycomb structural body having a plurality of cells to function as a passage for a fluid divided by porous partition walls, specified cells being plugged at one of two end faces and the remaining cells being plugged at other end face alternately, a fluid flowing into an unplugged end face side of one set of cells being caused to pass through the cells and permeate through the partition walls, thus permeated fluid being discharged from an unplugged end face side of the other cells, wherein a cross-section pattern of the partition walls perpendicular to flow direction of the fluid has a grille shape of which gratings cross in x axis and y axis directions, and there are at least two kinds of cells different from each other in their cross-sectional areas perpendicular to the flow direction of a fluid to be filtered due to different interval pitches of the partition walls in the x axis direction and/or different interval pitches of the partition walls in the y axis direction, wherein a plurality of cells having largest cross-section among said plurality of cells has a rectangle shape and thickness of partition wall defining a long side of the cell having the largest cross-section is thicker than thickness of partition wall defining a short side of the cells having largest cross-section.

5. (Original) The honeycomb structural body according to claim 1, wherein the partition wall has a porosity of 20% or more.

6. (Original) The honeycomb structural body according to claim 2, wherein the partition wall has a porosity of 20% or more.

7. (Original) The honeycomb structural body according to claim 1, wherein the partition wall is made of a material containing a ceramic and/or a metal as major components.

8. (Original) The honeycomb structural body according to claim 2, wherein the partition wall is made of a material containing a ceramic and/or a metal as major components.

9. (Original) The honeycomb structural body according to claim 5, wherein the partition wall is made of a material containing a ceramic and/or a metal as major components.

10. (Original) The honeycomb structural body according to claim 6, wherein the partition wall is made of a material containing a ceramic and/or a metal as major components.

11. (Original) The honeycomb structural body according to claim 7, wherein the major components forming the partition wall are at least one material selected from the group consisting of cordierite, mullite, alumina, spinel, silicon carbide, silicon nitride, aluminum nitride, zirconia, lithium aluminum silicate, aluminum titanate, Fe-Cr-Al metals, metal silicon, activated carbon, silica gel, and zeolite.

12. (Original) The honeycomb structural body according to claim 1, wherein a catalyst is carried on surface of the partition wall and/or pore surface inside the partition wall.

13. (Previously Presented) A filter structure comprising a honeycomb structural body having a plurality of cells to function as a passage for a fluid divided by porous partition walls, specified cells being plugged at one of two end faces and the remaining cells being plugged at other end face alternately, a fluid flowing into an unplugged end face side of one set of cells being caused to pass through the cells and permeate through the partition walls, thus permeated fluid being discharged from an unplugged end face side of the other cells, wherein a cross-section pattern of the partition walls perpendicular to flow direction of the fluid has a grille shape of which gratings cross in x axis and y axis directions, and there are at least two kinds of cells different from each other in their cross-sectional areas perpendicular to the flow direction of a fluid to be filtered due to different interval pitches of the partition walls in the x axis direction and/or different interval pitches of the partition walls in the y axis direction; said honeycomb structural body being installed in a fluid passage to collect substances to be removed from the fluid,

wherein, in the cross-section pattern, each partition wall constitutes a straight line extending across an entire area of the cross-section pattern.

14. (Currently Amended) ~~The filter structure according to claim 13,~~ A filter structure comprising a honeycomb structural body having a plurality of cells to function as a passage for a fluid divided by porous partition walls, specified cells being plugged at one of two end faces and the remaining cells being plugged at other end face alternately, a fluid flowing into an unplugged end face side of one set of cells being caused to pass through the cells and permeate through the partition walls, thus permeated fluid being discharged from an unplugged end face side of the other cells, wherein a cross-section pattern of the partition walls perpendicular to flow direction of the fluid has a grille shape of which gratings cross in x axis and y axis directions, and there are at least two kinds of cells different from each other in their cross-sectional areas perpendicular to the flow direction of a fluid to be filtered due to different interval pitches of the partition walls in the x axis direction and/or different interval pitches of the partition walls in the y axis direction; said honeycomb structural body being installed in a fluid passage to collect substances to be removed from the fluid,
wherein, in the cross-section pattern, each partition wall constitutes a straight line extending across an entire area of the cross-section pattern;
wherein the cells having largest cross-sectional area perpendicular to fluid flow direction among the cells forming the honeycomb structural body are open without being plugged at an end face on an inlet port side of the fluid and are plugged only at an end face opposite the inlet port side.

15. (Original) The filter structure according to claim 13, wherein the honeycomb structural body is installed in such manner that a total sum of a cross-sectional area perpendicular to the fluid flow direction at end face of cells that are open on an end face on an inlet port side of the fluid is larger than or equal to a total sum of a cross-sectional area perpendicular to the fluid flow direction at an end face of cells that are open on an end face on an outlet port side of the fluid.

16. (Original) The filter structure according to claim 13, wherein the honeycomb structural body is used to collect and remove fine particulates in exhaust gas as a filter.

17-20. (Canceled)

21. (Previously Presented) The honeycomb structural body according to claim 1, wherein the partition walls have a same thickness in at least one of the x axis or y axis directions.

22. (Previously Presented) The filter structure according to claim 13, wherein the partition walls have a same thickness in at least one of the x axis or y axis directions.